

REMARKS

A final rejection was mailed in the present case on August 12, 2009, making a Response due in the case on or before November 12, 2009. This Response is being submitted along with a Request For Continued Examination and the required examination fee. No additional fee is thought to be due at this time, other than the fee for the RCE. If any additional fee is due for the continued prosecution of this case, please charge the same to Applicant's Deposit Account No. 50-2555 (Whitaker, Chalk, Swindle & Sawyer, LLP).

In the latest Office Action, the Examiner has continued the rejection of Applicant's Claims 1-4 and 9-10 under 35 U.S.C. §103(a) as being unpatentable over JP09-268012. Claims 1, 3 and 5 were rejected under 35 U.S.C. §103(a) as being unpatentable over Smith (US 4781759). Claims 1-3 and 6 were rejected under 35 U.S.C. §103(a) as being unpatentable over Leclercq (US 2003/0138614). Claim 7 was rejected under 35 U.S.C. §103(a) as being unpatentable over Leclercq in view of Friedman et al. (US 5340558). Finally, Claims 1-3 and 8-10 were rejected under 35 U.S.C. §103(a) as being unpatentable over Hartman (US 4051056).

Applicant has made a number of amendments to remaining independent Claim 1 in the case in view of the Examiner's remarks. Claims 2-10 were amended to provide proper antecedent basis for the amended language used in Claim 1 and to insert the Americanized spelling for the term "characterized." Applicant respectfully requests reconsideration of Claims 1-10, as amended in view of the following remarks:

A. The Rejection Based Upon JP09-268012:

1. First with regard to the Japanese reference, JP09-268012, Applicant notes that in light of the earlier Office action of 02/17/2009, the Examiner now rejects claims 1-4 and 9-10 only under 35 U.S.C. 103 (a), as being obvious over JP09-268012, rather than rejecting these claims for lack of novelty under 35 U.S.C. §102(b). However, Applicant respectfully submits that the present invention, being directed to a solution to the LACK OF FLOWABILITY of powdery calcic compounds, which consists in combining the

original calcic powder with a SELECTED mineral solid FLOW AGENT [claim 1 : "selected from the group consisting of..."] including sand, is not made obvious in the light of JP09-268012. The Japanese reference deals with a process of producing a very reactive (very fine) slaked lime, by drying a lime slurry in a heated fluidized bed containing sand.

Even if, as assumed by the Examiner in his Office action of 02/17/2009, "it would have been reasonable to expect that during the process, a small amount of sand would be mixed with the slaked lime" (we will show below that a man skilled in the art will not consider that it is the case), JP09-268012 fails to make any mention of the requirement of a "flow agent" and there is, therefore, absolutely no suggestion or incentive for one skilled in the art to use the teaching of JP09-268012 to solve the problem of lack of flowability of the slaked lime powders and to make the appropriate selection of a flow agent (or to know that sand is among the flow agents).

2. Secondly, Applicant would ask the Examiner to reconsider the previously stated argument with regard to JP09-268012 by allowing Applicant to highlight the argument differently. For example, consider that, in case of windy weather, a solid particle will be entrained by the wind the following way :

- a) the smaller particle will move easier (earlier) and go further or longer than a bigger one of the same nature ;
- (b) the lighter particle (the less dense one) will move easier (earlier) and go further or longer than the heavier one (of higher density) if of same size but of different nature ;
- c) combining a) and b), a light (of low density) small particle will move a lot easier and go a lot further or longer than a big heavy particle (of high density).

Considering the above information, one can conclude that by choosing well the nature and the size of the big particle, it would become possible to have a situation like in c), but where the big heavy particle will not move at all or just a small step and thus the fine light particles will be separated from the big heavy ones, for a given range of wind speeds.

Take very fine slaked lime (below 50 μm , for example 15 μm or 2.5 μm , as in Examples 1 and 2 of JP09-268012) as fine light (density of 1.3 g/cm^3) particles and sand (above 100 μm , up to 1500 μm with an average of 460 or 600 μm) as heavy (density of 2.65 g/cm^3) big particles, put them in a vertical column and use air from the bottom as wind and you have a fluidized bed as described in JP09-268012. As already mentioned in our response to the first Office action, it is well known that in a fluidized bed, the larger and denser particles return to the top of the (vertical) bed (due to gravity) and the finer and lighter particles are carried upwards (see the copy of page 20-62 of Perry's Chemical's Engineer's Handbook, sixth edition, in Attachment 1 of Applicant's amendment of 05/08/2009).

From the above information, it is clear that it is possible to find a range of air speeds in the fluidized bed, such that no sand will remain mixed with the slaked lime, because being too heavy, it will come back to the bed by gravity.

Even if the Examiner would like to state that a separation is never absolute and that some traces of silica would remain in the slaked lime, it will never be possible to distinguish these traces of silica from the silica always present in the original slaked lime of the slurry (see in Applicant's Specification p. 1, "This calco-magnesian material (of formula I) obviously contains impurities, such as silica, alumina, etc, to the extent of a few percent." [0005] of the published patent application US20070107637).

Further, if traces of silica remain in the slaked lime during the separation, as argued by the Examiner in the previous Office Action, it is necessary that the silica has been entrained with limestone during the fluidization. That means that, in said traces, the silica would show a size and density similar to the limestone, i.e. less than 50 μm in the Japanese document. However, in the Office Action, on page 6, second paragraph of the Response to Arguments, the Examiner submits correctly that the sand size in the Japanese document is in the range of 100-1500 μm arguing that:

The Examiner respectfully submits that the prior art discloses that the sand size is in the range of 100-1500 micron. And in the example the medium size is 460 micron. The smallest size of the sand is 100 micron. Second, the applicant fails to provide any facture

[SP? factual] evidence to show that sand particle with a size of 50 micron or less is in the composition.

In other words, the Examiner is arguing that Applicant has failed to effectively provide any factual evidence to show that sand particle with a size of 50 microns or less is in the composition of the Japanese document because there is effectively and obviously no possibility of the presence of such sand particles after the fluidization of the Japanese document. As such, the Examiner appears to be agreeing with Applicant's argument as restated above.

3. For sake of argument, assume for the moment that, against all expectations, a "man skilled in the art" would think to use the teaching of JP09-268012, to solve the problem facing Applicant. According to the above information, he will be motivated by JP09-268012 to choose the inert material amongst the heaviest (of highest density) and with the biggest particles, which guarantees the best separation with the slaked lime (because JP09-268012 wants to lead to a very reactive slaked lime, therefore pure). The purpose of the Applicant's invention, however, is to have a powder with good flowability (namely in pneumatic transport). This aim will never be reached with a too heavy and/or too big, inert material which will not move or will segregate in case of pneumatic (air) transportation, for the reason of c) above. As a result, one "skilled in the art" will never use the teaching of JP09-268012 for Applicant's purpose.

For all of the above reasons, Applicant would respectfully request that the Examiner reconsider the previously reached conclusion that the presently claimed invention is "obvious" in view of the teaching of JP09-268012.

B. The Newly Stated Rejections Based Upon Obviousness:

1. US 4 787 759 to Smith :

a) - Applicant would again restate the argument that the current invention deals with a solution to the LACK OF FLOWABILITY of powdery calcic compounds, which consists in combining the original

calcic powder with a SELECTED mineral solid FLOW AGENT [claim 1 : "selected from the group consisting of..."], and that the solution to such a problem is not made obvious by the teaching of Smith: a process providing traction on ice or snow, providing 75-95% of crushed limestone and 5-25% ground clay.

The Smith reference deals with a totally different problem to solve and different domain of application, with totally different constraints. Even if we take the particular clay case of the attapulgate, highlighted by the Examiner, nothing in Smith will teach a man skilled in the art that the attapulgate, having for Smith an ANTI-FREEZING action, will be a FLOW AGENT (Claim 1 of the current invention) in pneumatic transport of a powdery limestone.

b) Further with regard to Smith, please note that the Applicant shows explicitly in Example 2 of the invention (see Table 1 and the comments above, [0042] and [0025] +[0026] of the published patent application US20070107637) that some clays are NOT suitable as flow agents for Applicant's purposes: talc, sepiolite and bentonite. Please note that bentonite is explicitly cited by Smith as a good candidate for his own invention (see US 4787759, col. 3, 1.1).

As a consequence, it is clear that the Applicant had to make a selection among the available clays, compared to the ones used by Smith. As such, Applicant's invention cannot be said to be obvious over Smith.

Applicant has also amended independent Claim 1 to include the specific feature that the "powdery calcic compound" has a particle size "less than 250 μm ." Note that the Smith reference cited by the Examiner teaches a grain size for limestone between 1/4 inch (0.635 cm) and 30 mesh ($\sim 600 \mu\text{m}$). The new claim language clearly distinguishes the teaching of Smith.

2. U. S. Patent Publication No. 2003/0138614 to Leclercq:

a) Again, the problem faced by Applicant is finding a solution to the LACK OF FLOWABILITY of

POWDERY calcic compounds (carbonate or hydroxide), which consists in combining the original calcic powder with a SELECTED mineral solid FLOW AGENT [claim 1 : "selected from the group consisting of..."], which invention is not rendered obvious by the teaching of Leclercq which is dealing with: a plasterboard composition comprising 55% to 92% hydratable calcium SULPHATE (a major component of plasterboard) and 3% to 25 % mineral additive, half of which (max 12.5% of the total composition so minor component) could be dolomite (see [0051]) and 1% to 5% of unexpanded vermiculite, those additives being there for FIRE RESISTANCE or MECHANICAL STRENGTH.

It is obvious from the plain reading of Leclercq that the reference is dealing with a totally different problem to solve and different domain of application, with totally different constraints.

From the description of the present invention, it is clear that the calcic compound is a carbonate or an hydroxide, and that a sulphate is NOT the major component of the claimed calcic compound. Moreover, Leclercq fails to describe the composition as being "powdery" or that vermiculite is a "flow agent".

b) With regard to Claim 7, please note that if Leclercq clearly specifies the use of UNEXPANDED vermiculite, that consequently it must mean that expanded vermiculite is not suitable. Otherwise, Leclercq would have mentioned "vermiculite" alone or "expanded and unexpanded vermiculite." It is consequently not obvious, in view of Leclercq, even in the light of Friedman, to use "expanded" vermiculite, because on the contrary, there is no teaching or motivation for one skilled in the art to do so. For this reason, it is clear that the Applicant's invention is not obvious over Leclercq.

3. US 4 051 056 to Hartman:

a) Again, Applicant's invention deals with a solution to the LACK OF FLOWABILITY of POWDERY (solid) calcic compounds, which consists in combining the original calcic powder with a SELECTED mineral solid FLOW AGENT [claim 1 : "selected from the group consisting of..."]. Such invention would not be rendered obvious by the teaching of Hartman which deals with abrasive LIQUID compositions (see claim 1) comprising 2 - 25 % of expanded perlite (as ABRASIVE agent) and

optionally a "conventional" abrasive mineral, among them calcium carbonate, but in less than 15%, preferably less than 5% of the composition (see col.16, l. 5-12). The calcium carbonate is obviously a minor component, used in a composition directed to the solution of a totally different problem, a different domain of application, with totally different constraints.

From the description of the current invention, it is clear that the calcic compound is a carbonate or a hydroxide and contains a small quantity of a selected flow agent. Moreover, Hartman claims a "liquid" composition and so fails to teach that the composition is "powdery" and that perlite is a "flow agent" (perlite is the ABRASIVE agent for Hartman).

b) see 2) b). Applicant repeats the previously stated argument with respect to the Leclercq reference. As a consequence, it is clear that the Applicant's invention is not rendered obvious by the teaching of Hartman.

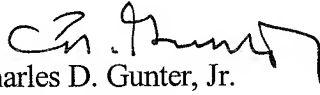
Further Claim Amendments:

Note further, that by way of amendment, Applicant's remaining independent Claim 1 now calls for a "powdery calcic compound" in place of a "powdery composition based on a calcic compound." This amendment is intended to further distinguish the Leclercq, Friedman and Hartman references which are clearly not "powdery calcic compounds" where the calcic compound is a carbonate or a hydroxide and contains a small quantity of a selected flow agent.

Based upon the above arguments and amendments, amended Claims 1-10 are now thought to be allowable over the art of record and an early notification of the same would be appreciated.

Respectfully submitted,

Date: Nov 10, 2009


Charles D. Gunter, Jr.
Reg. No. 29,386
Whitaker, Chalk, Swindle & Sawyer, LLP
301 Commerce St, Suite 3500
Fort Worth, Texas 76102
(817) 878-0504

ATTORNEY(S) FOR APPLICANT